Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP:\_\_\_\_\_\_\_\_

CW 49: ANGRY BIRDS!!!!!

**Honors Geometry**

Red Bird, Yellow Bird, Blue Bird and Black Bird are angry with the pigs! The pigs stole the bird’s eggs. The birds want their eggs back and will stop at nothing to get them back. The flight path of the birds is modeled with a quadratic function, where x represents horizontal distance traveled and y is the vertical height that the birds reach.

Part 1) Find the solutions of each function by factoring.

Part 2) Determine the following information for **each** bird:

1. Bird’s **maximum height**
2. Bird’s **ending location**
3. Location of vertex
4. Axis of Symmetry

Part 3) Graph each bird’s flight path (on the same coordinate plane) including:

1. Table of at least 5 values
2. Labeled vertex, axis of symmetry and zeros

Part 4) Answer the following questions:

1. Which bird flew the heighest and traveled the longest?
2. Which birds, if any, would hit either of the following pigs? Justify your answer.

|  |  |
| --- | --- |
| **King Pig located at point (6,24)** | **Moustache Pig located at point (11,35)** |

1. If a 15 foot wall was built, which of the birds would be able to fly over the wall? Explain how you know this.
2. Based off of your graph, estimate the horizontal distance and vertical height at which the red and yellow birds intersect.

|  |  |  |  |
| --- | --- | --- | --- |
| **Red Bird:** | **Yellow Bird:** | **Blue Bird:** | **Black Bird:** |